A18 cancel.

inspection point, step 690 determines whether the inspection is complete. If not, process 600 branches back to step 640 to accept further Cartesian movement commands for movement to another inspection point. If the inspection is complete, process 600 ends in step 695.

In accordance with 37 CFR § 1.121(b)(1)(iii), Attachment A contains marked up versions of the replacement paragraphs illustrating the newly introduced changes in the specification.

IN THE CLAIMS

The following is a clean version of the entire set of pending claims. In accordance with 37 CFR § 1.121(c)(1)(ii), Attachment B provides marked up versions of the claims containing the newly introduced changes.

1. A device comprising:

a polar coordinate stage that includes a linear drive and a rotatable platform mounted on the linear drive, wherein an object to be imaged is placed on the rotatable platform;

an imaging system;

an image rotator; and

a control system coupled to the polar coordinate stage and the image rotator, wherein the control system controls the image rotator and causes the image rotator to rotate an image to compensate for rotation of the rotatable platform and preserve orientations of features in the image.

A19

2. (Amended) The device of claim 1, wherein the control system applies control signals to the polar coordinate stage to control movement of the object and applies control signals to the image rotator to compensate for the rotation of the object.

3. The device of claim 2, further comprising an operator interface including a monitor for viewing the image.

4. The device of claim 3, wherein the operator interface further comprises a control coupled to send to the control system commands indicating a desired motion of the image viewed on the monitor.

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5. The device of claim 1, wherein the rotatable platform has a rotation axis that intersects a linear drive axis along which the stage moves rotatable platform.

A20

6. (Amended) The device of claim 5, an optic axis of the imaging system is stationary relative to the polar coordinate stage and coincides with the linear drive axis.

7. The device of claim 1, a setting of the linear drive indicates a displacement of the linear drive relative to a zero displacement position.

8. The device of claim 1, further comprising an orientation monitoring system that measures an angular displacement of the rotatable platform relative to a zero angular displacement setting.

9. The device of claim 1, further comprising a video camera and a display monitor.

A21

10. (Amended) The device of claim 9, wherein the image rotator comprises an image capture and image processing system that captures the image from the video camera and rotates the image by an amount selected by the control system.

11. (Amended) The device of claim 1, wherein the imaging system comprises a microscope.

12. The device of claim 11, wherein the image rotator comprises a rotatable dove prism on an optical axis of the microscope.

13. The device of claim 11, further comprising a video camera and a display monitor.

14. The device of claim 13, wherein the image rotator comprises a rotatable Dove prism on an optical axis of the microscope.

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A22

15. (Amended) The device of claim 13, the image rotator comprises software which is capable of rotating a video image from the video camera.

16. The device of claim 1, wherein the imaging system comprises a scanning probe microscope.

17. The device of claim 1, wherein the imaging system comprises a scanning microscope.

18. The device of claim 17, further comprising an image processing system and display monitor.

19. (Amended) The device of claim 17, wherein the image rotator comprises a set of beam deflectors that changes orientation of an area scanned on the surface of the object.

A23

20. (Amended) The device of claim 17, wherein the scanning microscope is a scanning electron-beam microscope.

21. (Amended) The device of claim 17, wherein the scanning microscope is a scanning ion-beam microscope.

22. The device of claim 1, wherein the imaging system comprises a confocal microscope.

23. The device of claim 22, further comprising an image processing system and a display monitor.

24. The device of claim 1, wherein the image rotator comprises a rotatable dove prism.

25. The device of claim 1, wherein the image rotator comprises software which allows rotation of a digitized image.

26. The device of claim 1, wherein the control system comprises a processor executing a module that converts Cartesian coordinate input commands relative to an image

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of the object to polar coordinate stage commands and image rotator commands.

27. A method for viewing an object, comprising:

mounting the object on a polar coordinate stage;

viewing an image of a region of the object;

using the polar coordinate stage to move the object; and

rotating the image of the object as the object moves so that features in the image retain a fixed orientation while the object rotates.

28. A measuring device comprising:

a polar coordinate stage including a rotatable platform for mounting of a sample;

an alignment system including an edge detector and a processing system that identifies a position of the sample from measurements that the edge detector takes while the polar coordinate stage rotates the sample;

a measurement system for measuring a physical property of a portion of the sample that the polar coordinate stage moved into a field of view of the measurement system; and

an imaging system for obtaining an image of a portion of the sample that the polar coordinate stage moved into a field of view of the imaging system.

SUB (31) 29. The measuring device of claim 28, further comprising an image rotator that rotates the image to compensate for rotation of the sample by the polar coordinate stage.

30. The measuring device of claim 29, wherein the alignment system further comprises a pattern recognition module that identifies a feature in the image as rotated by the image rotator and from identification of the feature, determines a position of the sample.

31. The measuring device of claim 29, wherein the imaging system includes a video camera and the image rotator rotates a video image from the video camera.

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31. 28
~~32.~~ (Amended) The measuring device of claim ~~29~~, wherein the image rotator comprises an optical element for rotating the image.

SUB (32) 33. The measuring device of claim 28, wherein the alignment system further

comprises a pattern recognition module that identifies a feature in the image and determines a position of the sample.

34. A measuring method comprising:

mounting a sample on a polar coordinate stage, wherein the sample as mounted has a position known to a first accuracy;

measuring edge locations of the sample while the polar coordinate stage rotates the sample;

prealigning the sample by determining the position of the sample from the edge locations, wherein the prealigning determines the position of the sample to a second accuracy;

using the polar coordinate stage to move the sample so that a view area of an imaging system contains a first feature;

rotating an image formed by the imaging system to compensate for rotation of the sample by the polar coordinate stage;

using a pattern recognition module to process the rotated image and identify a first location corresponding to the first feature; and

measuring a property of the sample at a point having a position identified relative to the first location.

35. (Amended) The method of claim 34 further comprising:

using the polar coordinate stage to move the sample so that the view area of the imaging system contains a second feature;

rotating the image formed by the imaging system to compensate for a rotation of the sample by the polar coordinate stage while moving to the second feature;

using the pattern recognition module on the rotated image to identify a second location corresponding to the second feature; and

using identification of the first and second locations to determine the position of the sample to a third accuracy.

36. (Amended) The method of claim 34 further comprising:

using the polar coordinate stage to move the sample so that a plurality of points are sequentially positioned for measurement of the property of the sample at the points; and

sequentially measuring the property of the sample at the measurement points.

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